

WHAT CLAIMED IS:

1. A management system of a machine equipped with a driving power source, comprises:

a maintenance management information storage means that stores information about conditions of maintenance on the basis of both usage conditions and operating conditions for each model of the machine;

an input means for entering data of the machine's model, the usage conditions, and the operating conditions into the storage means;

a display means; and

a control means, wherein

on the condition that the machine's model, the usage conditions and the operating conditions of the machine have been entered in the storage means through the input means, the control means reads out conditions for maintenance that correspond to the machine's model, the usage conditions, and the operating conditions, respectively, from the storage means to predict information about a recommendation for maintenance management at a predetermined operation time of the machine with reference to the conditions of maintenance.

2. A management system of a machine as claimed in Claim 1, further comprising:

a state-measuring means to measure the state of the machine and to produce information about the results of measurement, wherein

the control means optimizes the information about a recommendation for maintenance management with reference to the information about the results of measurement from the state-measuring

means.

3. A management system of a machine as claimed in Claim 2, wherein
the control means includes a different part determination means that
estimates the unusual part of the machine on the basis of the information
about the results of the above measurement provided from the
state-measuring means and determines whether there is a need of replacing
the part with new one.

4. A management system of a machine as claimed in Claim 2, wherein
the control means includes a means for reconsidering a
part-replacing condition among the conditions for maintenance, which are
stored in the storage means for storing the maintenance management
information with reference to the predicted maintenance management
recommendation information and the maintenance conditions stored in the
maintenance management information storage means.

5. A management system of a machine equipped with a driving power
source, comprises:

a client terminal and a server connected to the client terminal
through a network, wherein

the client terminal includes:

an input means for entering data of the machine's model, usage
conditions, and operating conditions;

a display means;

a control means for transmitting the data of the machine's model,
usage conditions, and operating conditions to the server through the

network and representing the received information on a screen of the display means, and

the server includes:

a maintenance management information storage means that stores maintenance conditions depending on the usage conditions and the operating conditions for each model of the machine; and

a control means that reads out the data of machine's model, the usage conditions, and the operating conditions transmitted from the client terminal, predicts information that recommends a maintenance management at a predetermined operation time with reference to the maintenance information, and represents the predicted information that recommends a maintenance management on the display means.

6. A management system of a machine as claimed in Claim 5, wherein the server distributes the predicted maintenance management recommendation information to the client terminal connected to the server through the network.

7. A management system of a machine as claimed in Claim 6, wherein the server executes the predicted maintenance management recommendation information under some conditions, the server include a means for representing the contents of cost estimation on the display means with respect to each of these conditions.

8. A management system of a machine, comprises:

a maintenance rank table organized by model that stores a maintenance prediction value with respect to a maintenance within a

contract term or a contract time for two or more contract ranks every each model;

an input means that enters a model of machine that makes a maintenance contract, a contract rank, and a maintenance actual result value;

a means for storing a maintenance actual result value, where the maintenance actual result value of the machine, which is entered using the input means and accumulatively stored; and

a determination means that determines whether a maintenance actual result value is larger than a maintenance prediction value, where the maintenance prediction value that corresponds to the machine's mode and the contract rank is read out of the maintenance rank table organized by model after a expiration of the contract of the machine, while the maintenance result value of the machine is read out of the storage means that stores the maintenance actual result value.

9. A management system of a machine as claimed in Claim 8, wherein the determination means includes a means to calculate a dividend, where a dividend is calculated if under the condition that the maintenance actual value is lower than the maintenance predicted value and the difference between these values is higher than the predetermined value.

10. A management system of a machine as claimed in Claim 8 wherein the contract rank of maintenance rank table organized by model is defined on the basis of the usage conditions and the operating conditions of the machine.

11. A management system of a machine, comprising:

a client terminal and a server that connects to the client terminal through a network, wherein

the client server includes an input means for entering a model of machine under a maintenance contract, a contract rank, a maintenance actual result value, a display means, and a control means that requests data to the server and represents the data transmitted from the server on the display means; and

the server includes a maintenance rank table organized by model that stores a maintenance predicted value with respect to a maintenance of each machine's mode within a contract time or a contract term every two or more contract ranks, a means of storing a maintenance actual result value, which accumulatively stores the maintenance actual result value of the machine entered from the client terminal, and a determination means that reads out the maintenance predicted value, which corresponds to the machine's model and the contract rank, from the maintenance actual result value storage means, while reads out the maintenance actual result value of the machine from the maintenance actual result value storage means, and then determines whether the maintenance actual result value is larger than the maintenance predicted value.

12. A management method of a machine equipped with a driving-power source, comprising the steps of:

storing maintenance conditions for each mode of the machine, which depend on usage conditions and operating conditions into a means for storing maintenance management information; entering data of machine's mode, the usage conditions, and the operating conditions;

reading out the maintenance conditions that correspond to the input data of machine's model, the usage conditions, and the operating conditions from the means for storing maintenance management information;

predicting maintenance management recommendation information at a certain operation time of the machine with reference to the maintenance conditions read out; and

displaying the maintenance management recommendation information on the display means.

13. A management method of a machine, comprising the steps of:

storing a maintenance predicted value with respect to a maintenance in a maintenance rank table organized by model in a contract time period or in a contract term every two or more contract ranks;

storing the mode of a machine under maintenance contract, contract rank, and maintenance actual result value;

accumulatively storing a maintenance actual result value of the machine being entered into the means for storing the maintenance actual result;

reading the maintenance actual result value out of the means for storing the maintenance actual result value in addition to read a maintenance predicted value out of the machine maintenance rank table organized by mode, where the maintenance predicted value correspond to the machine's mode and the contract rank; and

determining whether the maintenance actual result value is larger than the maintenance predicted value.

14. A management method of Claim 13, wherein

if the maintenance value is smaller than the maintenance predicted value, it is preferable to calculate and pay the dividend under the conditions that the difference between these values is larger than a predetermined value.

15. A management method of Claim 13, wherein

the contract rank of the maintenance rank table organized by model is reconsidered under the conditions that difference between the maintenance value and the maintenance predicted value is larger than a predetermined value, and a new contract rank is obtained by the reconsideration at the time of making a following maintenance contract, followed by using the new contract rank in the following maintenance contract.

16. A management method of Claim 15, wherein

if the contract rank in maintenance rank table organized by model is reconsidered, the usage conditions and operating conditions of the machine are considered in the process of reconsideration.

17. A computer program that allows a computer to execute a management method of a machine as claimed in Claim 1.

18. A recording medium that stores a computer program for allowing a computer to execute a management method of a machine as claimed in Claim 1.